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ABSTRACT

Accompanying a multimedia resource unit on aspects of rice growing, volume eight of the geography collection includes a section introducing terminology, a viewing guide to the filmstrips and unit test items. Rice farming and marketing in Australia and growing methods in several countries are presented with regional studies in southeast Australia. The test items collection is part of a geography series developed by the Assessment and Evaluation Unit of the Directorate of Studies. Teachers can construct unit tests, term examinations or use items for class discussion. The test items meet unit content and aims but item selection should be based on student ability and program objectives. (CM)

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New South Wales **Department of Education**

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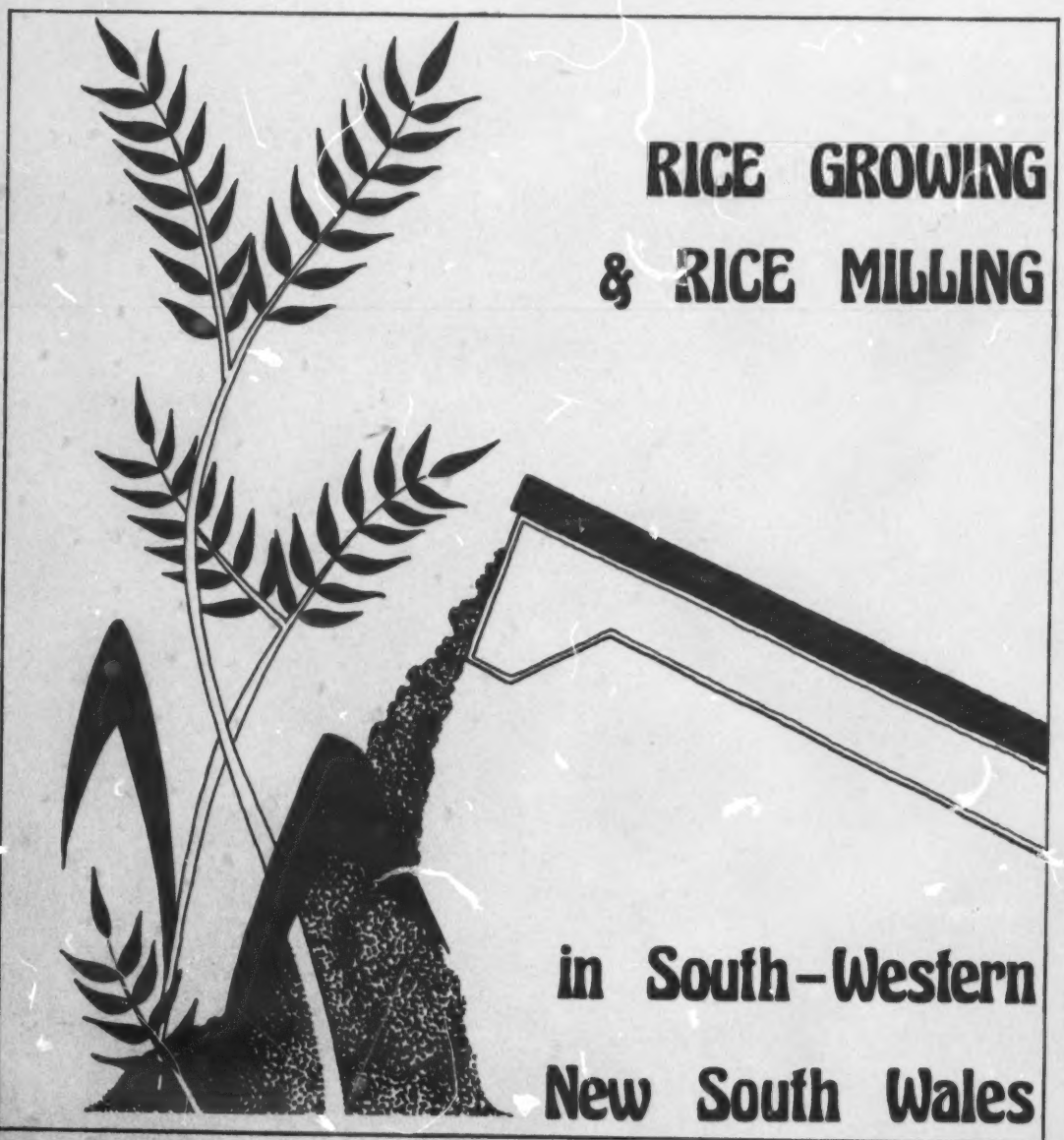
ED218297

GEOGRAPHY

LIBRARY OF TEST ITEMS

VOLUME SEVEN : A SELECTION OF TEST ITEMS TO ACCOMPANY THE RESOURCE KIT:



TM 510 300

FRAME NO.

39. _____and_____ are other crops grown. The typical rotation pattern is rice followed by _____ then _____, then 3-6 years of _____ before returning to rice.

40. Stock and crops are _____ activities in that they

a) _____.

b) _____.

41. It is important for the farmer to check

a) _____.

b) _____.

42. Water is kept moving to reduce the risk of _____ water and _____.

43. Wild _____ sometimes are a problem to young crops.

44. _____ offer advice to farmers.

45. It is important to keep careful _____ of all farm activities.

47. The water level is increased in _____ to around _____ centimetres and maintained until _____ is complete.

48. The crop is _____ just before harvest.

49. As the bays _____ out, the crop _____ fully.

50. To limit broken grains the moisture level of the crop when harvested must be between _____ and _____ percent.

51. The rice is handled in _____.

52. Rice harvesting begins in mid _____ and is completed by the end of _____.

53. In South Western N.S.W. most farmers are within _____ kilometres of a _____ shed.

54. At the storage shed the rice is _____ and is tested for _____ content

55. On arrival at the storage shed, the rice becomes the property of the _____ who sells the rice to the _____.

56. The temperature and moisture of the rice is controlled in the storage sheds by banks of _____.

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Published by the
School Certificate Development Unit
Directorate of Studies
New South Wales Department of Education.

February 1980

A SELECTION OF TEST ITEMS TO ACCOMPANY THE RESOURCE KIT:

"RICE GROWING AND RICE MILLING IN SOUTH-WESTERN NEW SOUTH WALES"

This selection of test items has been developed to provide the classroom Geography teacher with a range of materials to be used in conjunction with the resource kit "Rice Growing and Rice Milling in South-Western New South Wales".

The kit is a multi-media unit produced by the Teaching Resources Centre, N.S.W. Department of Education in association with the Rice Marketing Board. The Rice Growing section is based on the property of Mr. Dave Irvine, Farm 1132, Murrami. Rice Milling is based on the Leeton Rice Mill. The kit comprises:

- 2 filmstrips
- 1 audio cassette
- paper masters
- teachers' notes

The kit is available from any Regional Office of Education or from the Teaching Resources Centre, Burwood, N.S.W. Two 16 mm films were made at the same time as, and using the same locations as the filmstrips. The films are:

- Rice Growing in N.S.W.
- Rice Milling in N.S.W.

N.S.W. Government schools may borrow these from the Teaching Resources Film Library as 16 mm films or ¾" U-matic video cassette.

Non-Government schools should contact the N.S.W. Film Library, 1 Frances Street, Sydney 2000.

The kit, as presented, could be used as an aid for the teaching of aspects of a Geography course which includes:

- rice growing in Australia.
- a case study on farming in Australia.
- commercial farming in Australia.
- the marketing of an agricultural product.
- a comparison of rice growing methods in several countries.
- regional studies in S.E. Australia.
- irrigated farming in Australia.

The questions are specifically intended as a source of items for testing the knowledge and skills acquired by students from the teaching of a unit of work which incorporates the use of the kit. However, where appropriate, teachers may wish to use this material for:

- assignment work on a group or individual basis
- homework
- research work on a group or individual basis
- evaluating the effectiveness of teaching methods employed
- a source of ideas for in-school item construction.

Items in this collection may be reproduced for classroom use in any form desired by the teacher. To facilitate the preparation of printing masters, particular attention has been given to both the diagrams and the layout of items. However, it should be noted that stimulus material as presented was not designed for use with the overhead projector.

The items included are based on the information content available in the kit with some additional tables and graphs. However, as suggested in the kit, there are a number of organisations which make additional information available to schools.

The topographic mapping items are based on the Coleambally map sheet No. 8208 (1:100 000). At the time of printing it was the only map of the region which had been metricated.

It is not expected that all students should be able to do all the items included or that a teacher would want to set all the items for classroom use. Teachers should choose the items appropriate to their courses of study.

However, a good coverage of the items when used as tests and research/assignment work would provide students with a comprehensive and ordered coverage of any topic which included the growing and marketing of rice in Australia.

The items included are predominantly multiple choice, with some restricted free response questions. In the case of the multiple choice items, the aim has been to provide items as a service for teachers in the area of test construction where many experience greatest difficulty. However, it is expected that teachers should give thought to using a greater variety of testing techniques in order to adequately evaluate the widest range of educational objectives.

The material has been presented in three sections:

A. Introduction to the terminology of the kit before class use of the kit.

B. Exercises to be completed during the viewing of the film strip with audio cassette (or 16 mm film or video).

C. Items to be used for testing of the knowledge/skills enhanced by teaching programmes which incorporate the use of the kit.

TEST PREPARATION USING THE ITEM BANK:

Two copies, punched for ring-binding, are sent to each school - one for cutting up to produce a "printing master" and another to be left intact as a master file. If the cut-up items are used carefully and stored suitably, they should be able to be used many times for making printing masters. (See "Preparation of Printing Masters") It is suggested that large envelopes be bound in the ring binder to store cut-up items.

In the typical presentation of multiple choice questions in this bank:

- the stimulus or general data is provided
- the stem or question is asked
- four alternatives or options to the stem are provided
- the key is the correct alternative
- the distractors are the remaining alternatives.

Items in the library may be reproduced for classroom use in any form desired by teachers. To facilitate the preparation of printing masters, particular attention has been given to both the diagrams and layout of items.

The keys or answers to questions are provided at the end of each topic.

The order, groupings or sub-groupings of questions are not designed to reflect any suggested order of treatment but rather to facilitate the publishing of the questions.

It will become evident that it has been impossible to locate all questions in small watertight compartments. Questions on a particular concept or area of content may be found in more than one category.

The numbers allocated to items are intended only to identify the items.

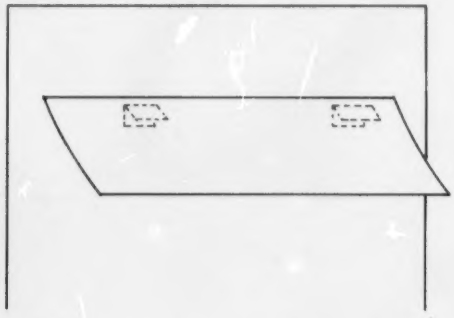
Preparation of Printing Masters

This method is recommended as it allows the prepared master to pass through a typewriter for the addition of page and question numbers etc. and prevents the electric scanner "reading" sticky tape patches and top edges of cut items.

1. Type your test heading on a blank page.

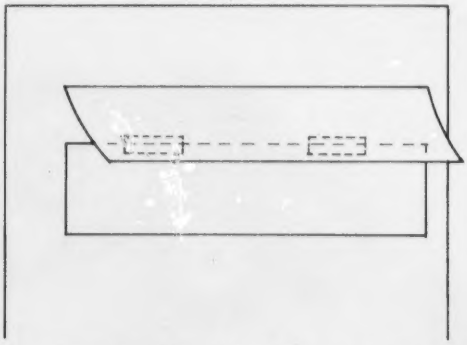
2. Cut out items carefully. Always cut *very* close to and *below* the lines which separate questions.

3. Fix question 1 in position, "stamp-hinge" style:



4. Slide the top edge of Q.2 under the bottom edge of Q.1, and position Q.2 correctly.

5. Holding Q.2 in position, lift the bottom edge of Q.1 and tape Q.2 in position, so that when Q.1 is allowed to sit flat again, it completely covers the tape used to hold Q.2. Q.2 should be fastened by its top edge only.



6. Stick Q.3 in place as described for Q.2 in (4) and (5) above.

Although this selection of test items has been specifically prepared for use with the resource kit on Rice Growing, its content and scope will also compliment the Geography Unit model FARMING. A RISK VENTURE. This unit model contains a number of case studies, one of which is based on farming in the Riverina Region.

FARMING. A RISK VENTURE is one of a series of Geography units being developed by the Directorate of Studies and will appear as Curriculum Newsletter S.G. 17. It should be in all schools in late 1980.

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Writing, Review and Editorial Committee.

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Henry Kozlowski	-	Canley Vale High School
Norm Mitchell	-	Hurlstone Agricultural High School
John Morrison	-	Elderslie High School
Graeme Small	-	Wade High School

Comments from teachers are welcome. All correspondence should be addressed to:

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The presentation of this volume has been changed in order to reduce the cost to schools in their reproduction of the items. The type pitch and spacing have been reduced, enabling a larger number of questions to be printed on each page.

At this stage, it is proposed to publish all future volumes in this new format. Any comments and suggestions regarding this change are welcome.

GEOGRAPHY

LIBRARY OF TEST ITEMS

CONTENTS

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	A Selection of Test Items to Accompany the Kit: "Rice Growing and Rice Milling in South-Western-N.S.W."	Z

SECTION A

SECTION A

For students to fully comprehend the kit, it is essential that terms and phrases used in the kit are fully understood. Section A provides a list of some of the more common terms and phrases associated with rice milling and rice growing and with which students would not normally be familiar.

All the terms and phrases are used in the kit, but usually without explanation. This section may be issued by the teacher as information content, or be used as a library/research exercise prior to use of the kit by students.

SECTION A

AERIAL SOWING	The distribution of seeds into a prepared paddock by an aeroplane.
AGRONOMIST	A person who specialises in farming practices and land management and provides information to farmers.
BULK HANDLING	Large scale transportation and handling of rice.
C.I.A.	Coleambally Irrigation Area.
COMPLEMENTARY	Activities on a farm which help one another.
CONTOURED BAY	A paddy field formed between two banks which follow the contours of the farm.
CONTRACTOR	A person who, using specialised equipment, is hired by a farmer to complete some of the farm jobs, e.g. transporting rice to mill, aerial sowing.
CROP ROTATION	Planting different kinds of crops in a paddock over a period of time.
DELVER	Attached to a tractor, it is an implement which builds a bank by digging a ditch and throwing soil to one side.
FARM 1132	Farms were numbered when the area was first surveyed for irrigation farming before they were sold to farmers.
GERMINATION	The beginning of plant growth from seed.
HORTICULTURE	The growing of vegetables and fruit on farms.
IRRIGATION	The application of water by people to supplement the natural water supply.
LEGUME	A plant which takes nitrogen (in an innate form) from the atmosphere and converts it to a form usable by other plants.
LEVEE BANKS	A small ridge of earth enclosing areas of land that are to be flooded.
M.I.A.	Murrumbidgee Irrigation Area.
MIXED FARM	A farm where animals and crops are combined in the routine of the farm and both contribute to income.
NITROGENOUS FERTILIZER	Nitrogen is an important element in plant growth; hence it is applied in a compound form as a fertilizer.
PREROGATIVE	A right or privilege that others do not have.
RESEARCH	Scientific investigation into problems with the aim of improving yields.
SOIL TEXTURE	Size and distribution of particles in a soil. The soil is grouped into texture classes from gravel to clay.
TILLERING OF THE RICE	Side shoots to the main stem of a plant.
TYNE SOD SEEDER	An implement which makes a cut in the ground, drops the seeds into the opening then covers them over. The sod seeder is used where the soil has not been ploughed.
WHOLE GRAINS	Unbroken rice grains.
YIELD	The amount of crop harvested from a certain area of farmland.

SECTION B

SECTION B

This section of work is designed for student completion during the viewing of the filmstrips, 16mm films or video.

It is suggested that the filmstrips be run through once without student activity and then again so that students may complete this section.

The questions are all listed according to the film strip frame number. Where necessary, it may be to the students' advantage for the teacher to provide a selection of words or phrases from which the student makes a selection.

This section may also be used for individual or group work where school facilities are available.

The section is divided as follows:

1. Completion exercises for frames 1 to 56, Rice Growing in S.W. N.S.W.
2. Answers for the exercises on Rice Growing.
3. Completion exercises for frames 1 to 45, Rice Milling in S.W. N.S.W.
4. Answers for the exercises on Rice Milling.

1. VIEWING GUIDE : RICE GROWING IN S.W. N.S.W.

FILMSTRIP FRAME NO.

1. How many farmers grow rice in South West N.S.W. today?_____

2. Rice growing in South West N.S.W. is concentrated in the_____ _____districts of the_____and_____ river valleys.

4. The conditions necessary for rice growing found in this area include:

   a)_____.

   b)_____.

   c)_____.

5. Dave Irvine's farm is_____hectares in area, located_____ kilometres from_____

7. Fields are ploughed with a disc and scarifier to destroy_____ and bring the soil to a fine_____.

8. Land preparation is important for obtaining high rice_____.

9. Land planes are used to_____the surface to give good _____.

10. Hollows in a field can cause poor_____ of the rice and delays to_____. High spots will encourage the growth of_____

11. Surveying of the paddock is necessary to locate_____ _____ water supply and drainage _____.

12. Levee banks divide a paddock into_____. Banks are laid out along_____. Each bay would have a fall of_____to_____ centimetres. Banks are built with an implement called a_____.

13. Bays vary from_____to_____hectares, depending on the_____.

14. Soil samples are tested to determine the amount of_____ _____ required. If a paddock has had a good _____ based pasture it may not require fertiliser.

15. Decision making on the farm.
Information about new rice varieties is important as these vary in their_____and_____.

16. _____ days are held to help spread information.

17. A conventional_____is used to sow rice in_____. The area sown is limited to prevent _____.

18. Sod seeding has the following advantages:

   a)_____

   b)_____

   c)_____

FRAME NO.

19. Sod seeding requires a well_____, closely_____ paddock and careful _____.
The_____pasture increases the risk of_____and _____which must be treated with_____sprays.

20. After sowing the paddock is_____for up to 36 hours and then drained to allow_____of the seed.

21. The paddock is given several_____to assist rice growing and prevent the surface from_____.

22. Full_____and seedling_____are necessary for high yields.

23. The bays are kept flooded until the rice plants are_____to_____ centimetres high.

24. The advantages of aerial sowing are:
a)_____.
b)_____.
c)_____.

25. Before aerial sowing, _____is applied, the bays are _____ and the seed_____for 24 hours to allow_____to begin.

26. Aerial sowing is done in the_____when conditions are _____.

28. The water used by Dave Irvine is diverted from the_____ river by the_____weir.

29. The water is diverted into_____. Each crop requires _____to_____centimetres of fresh water.

31. The Rice Marketing Board's headquarters is in_____.

32. Supplies to the Irvine farm are delivered by a_____.

34. The Department of Agriculture's research programme is aimed at:
a)_____.
b)_____.
c)_____.

36. Cultivated_____is important in the_____ pattern on a rice farm. _____and_____are fattened on the pasture.

37. A paddock is sown to pasture each_____to_____years. This has three advantages:
a)_____.
b)_____.
c)_____.

2. ANSWER SHEET TO VIEWING GUIDE - RICE GROWING IN S.W. N.S.W.

FRAME NO.

1. Approx. 2000.

2. Irrigation, Murrumbidgee, Murray.

4. a) heavy soils suitable for ponding water.
   b) adequate water supply.
   c) long periods of high light intensity.

5. 223, 29, Leeton.

7. Weeds, texture.

8. Yields.

9. Even, drainage.

10. Tillering, harvesting. weeds.

11. Levee banks, points.

12. Bays. contours. 5, 10. delver.

13. 0.5, 10, topography.

14. Nitrogenous fertiliser. legume.

15. Yields, price.

16. Field.

17. Combine, October, oversupply.

18. a) eliminates cultivation before harvest.
    b) allows longer grazing in a paddock.
    c) reduces bogging during harvesting.

19. Graded, grazed, management. rotting, bloodworm, slime, chemical.

20. Flooded, germination.

21. Flushings, crusting.

22. Germination, establishment.

23. 5, 10.

24. a) reduces weeds.
    b) requires less cultivation.
    c) rice matures earlier.

25. Fertiliser, flooded, soaked, germination.

26. Morning, calm.

28. Murrumbidgee, Berembed.

FRAME NO.

29. Canals (channels). 150, 180.

31. Leeton.

32. Contractor.

34. a) increasing yields.
b) improving quality.
c) increasing tolerance of local conditions.

36. Pasture, rotation. cattle, sheep.

37. 3, 6.
a) maintains soil fertility.
b) minimises rice diseases.
c) supplements farm income.

39. Wheat, barley (or hay or oats). Wheat, oats (or barley), pasture.

40. Complementary
a) spread labour through the year.
b) allow common use of machinery.

41. a) water levels.
b) growing problems.

42. Stagnant, slime.

43. Ducks.

44. Agronomists.

45. Records.

47. December, 20, flowering.

48. Drained.

49. Dry, matures.

50. 18, 22.

51. Bulk.

52. March, April.

53. 8, storage.

54. Weighed, moisture (quality).

55. Rice Marketing Board, mills.

56. Electric fans.

3. VIEWING GUIDE - RICE MILLING IN S.W. N.S.W.

FRAME NO.

1. Rice harvesting is done in _____ and _____.

2. The machine which harvests the rice is a _____.

3. The moisture level of the rice when stored is _____.

4. Most early mills were located in _____ areas to handle the rice which was _____.

5. The first rice mill at _____ near Leeton was powered by a _____ until _____ became available.

7. Ricegrowers formed a _____ in 1951 and established their own mill at _____.

9. All N.S.W.'s rice mills are now owned by the _____ _____.

11. The rice industry is a _____ industry.

13. Prior to 1956 all rice was placed and stored in _____. Now _____ handling is used.

14. When the rice reaches the storage shed it is _____ and a _____ taken to determine _____ content.

15. The Rice Marketing Board's tests are designed to determine the _____ of each crop. This is the ratio of _____ grains to _____ grains.

16. The paddy with the _____ mill-out has the greatest _____.

17. The storage system is _____ and _____ controlled.

18. During storage the moisture level is reduced to _____.

19. As it is required the rice is moved to the _____.

21. The grain is firstly _____ to remove unwanted material.

22. Some paddy is _____ which increases mill-out and improves _____ qualities. This is also improved by adding water-soluble _____. The paddy is _____ under pressure and _____ treated.

23. Before going on to _____ the rice is _____.

24. The first process in milling is to remove the outer _____ to leave _____ rice.

25. This removes about _____ of the paddy weight. Some is used as _____ , but most is _____.

FRAME NO.

26. Although a world-wide problem few _____ feasible uses have been found for _____.

27. In case the _____ miss some grain, it is passed through _____.

28. The _____ rice is separated and the unhulled grain returned to the _____.

29. After removal of _____ and other _____ the brown rice moves to the _____.

30. Whitening involves the removal of the _____ layers and _____ from the grain which reduces weight by a further _____.

31. The bran is sold for _____.

32. The white rice then moves to the _____.

33. These cylinders _____ the _____ and _____ grains, leaving _____ grain rice.

34. Broken grains are used to make _____ _____ and _____.

35. The whole grain is examined by the _____ machine. This rejects _____ grain.

37. Large rice processors are supplied in _____ while export rice is _____.

38. The rice is transported to distribution centres by _____ and _____. _____ are used when the rice is sent overseas.

39. The rice is distributed overseas from large _____.

40. The proportion of Australia's rice exported is _____.

42. Australians consume _____ more rice than before 1939.

43. Rice mills are always trying to find new _____ for rice.

44. Rice mills are highly _____ and they require large amounts of _____.

45. They provide much _____ for people in this area.

4. ANSWER SHEET TO VIEWING GUIDE - RICE MILLING IN S.W. N.S.W.

FRAME NO	
1.	March, April.
2.	Header.
3.	18-22%.
4.	Coastal, imported.
5.	Murrami, tractor, electricity.
7.	Co-operative, Leeton.
9.	Ricegrowers' Co-operative.
11.	Decentralised.
13.	Bags. bulk.
14.	Weighed, sample, moisture.
15.	Mill-out. broken, whole.
16.	Highest, value.
17.	Aerated, temperature.
18.	16%.
19.	Mills.
21.	Cleaned.
22.	Parboiled, cooking. vitamins. steeped, steam.
23.	Milling, dried.
24.	Hull (husk), brown.
25.	18%. stockfeed, burnt.
26.	Economically, hulls (husks)
27.	Hullers, separators.
28.	Brown, hullers.
29.	Stones, rubbish, whiteners.
30.	Bran, germ, 10%.
31.	Stockfeed.
32.	Grading cylinders.
33.	Separate, short, broken, whole.
34.	Rice flour, breakfast foods, starch, canned foods etc.
35.	Sortex. discoloured.
37.	Bulk, bagged.
38.	Road, rail. containers.
39.	Warehouses.
40.	85%.
42.	50%.
43.	Uses.
44.	Automated, power (electricity).
45.	Employment.

SECTION C

This section includes a variety of items which may be used specifically for testing, or in general for student research and assignment work.

The section contains:

1. a set of restricted response questions which are based on the info.mation/knowledge content of the kit.

2. restricted response items which relate to photograph interpretation.

3. multiple choice items which are based on the Coleambally map sheet No. 8208 (1:100 000).

4. multiple choice items which relate to rice growing in S.W. N.S.W.

5. multiple choice items which relate to rice milling in S.W. N.S.W.

6. multiple choice items which are based on stimulus material, some of which is additional to that provided in the kit.

1. RESTRICTED RESPONSE ITEMS BASED ON THE INFORMATION CONTENT OF THE KIT

1. List the natural factors which make the region suitable for rice growing.
   1. _____
   2. _____
   3. _____

2. Write a paragraph describing the preparation of the land for rice sowing.

_____
_____
_____
_____
_____
_____

3. Describe the three methods of rice sowing.

_____
_____
_____
_____

4. Suggest why some paddocks may <u>not</u> need the application of nitrogenous fertiliser.

_____
_____
_____
_____

5. Describe the ways in which rice farming has modified the environment and altered the landscape.

_____
_____
_____
_____
_____
_____

6. List the other forms of primary production carried out on rice farms in South Western N.S.W.

_____
_____
_____
_____

7. What secondary industries would you find in the rice growing areas of South Western N.S.W.?

8. Explain the complementary nature of farming activities on N.S.W. rice farms.

9. What are the advantages of this type of mixed farming?

10. What advantages are there for rice growers by being paid in instalments?

11. How is the level of rice production on farms controlled by the Rice Industry?

12. Why is rice production controlled in the region?

2. PHOTOGRAPH INTERPRETATION

This set of questions is based on the picture study No. 29 in the series AUSTRALIAN LANDSCAPES (Geography Teachers' Association N.S.W.) Unit 2, Photograph No. 29: Rice Farming in the M.I.A.
This series is no longer available.

1. Complete a line drawing of the photograph. Label the features listed below on your drawing:

   a) river
   b) canal
   c) levees
   d) road
   e) cultivated land
   f) land not in use.

2. Name two ways in which man has changed the landscape.

3. What type of crop is under cultivation in this landscape? Give evidence from the photograph that indicates the type of crop under cultivation.

4. Is this subsistence or commercial farming? Give reasons for your answer.

5. Explain why some areas on the ground differ in colour from other areas.

6. What is the source of water for farms in this landscape?

7. What are the numerous "lines" which divide properties into rectangular and other shaped fields?
   What purpose do they serve?

8. Identify the areas of natural vegetation in the photograph. Do the areas of natural vegetation serve any purpose?

3. TOPOGRAPHIC MAP INTERPRETATION

COLEAMBALLY - MAP SHEET 8028

MAP SCALE 1:100 000

The 20 items which follow are based on the assumption that the entire map sheet is available to schools.

The Coleambally Map Sheet has been selected, because, at the time of printing, it was the only map of the region which had been metricated.

The map (1:100 000) is available from the Division of National Mapping. Mail Orders should be addressed to:

The Division of National Mapping
P.O. Box 548
Queanbeyan
A.C.T. 2620

Over the counter purchases may be made from the Division of National Mapping, Australian Government Centre, Chifley Square, 2000. Write or phone for current cost and availability. Order maps on school letterhead.

Questions Z1 to Z20 refer to the Topographic Map of Coleambally (1:100 000)

The contour interval used on the map sheet is

1. 10 metres.
2. 20 metres.
3. 30 metres.
4. 100 000 metres. Z1

The most significant natural feature for man is the

1. channel system.
2. Murrumbidgee River.
3. vegetation.
4. track system. Z2

What is the most significant man-made feature on the map?

1. The State Forest.
2. The Coleambally service centre.
3. The irrigation system.
4. The road transport system. Z3

A feature on the map which indicates that the area of land under irrigation is expanding is found at grid reference

1. 755425
2. 537020
3. 425755
4. 020537 Z4

The feature located at grid reference 044551 is a

1. cattle yard.
2. small dam.
3. rice shed.
4. State Forest. Z5

The Yamma Channel obtains its irrigation water from

1. precipitation.
2. the Argon Channel.
3. the Murray River.
4. the Murrumbidgee River. Z6

The grid reference for the town of Coleambally is

1. 990475
2. 975478
3. 478975
4. 475990 Z7

The settlement pattern found on the map sheet would be described as

1. dispersed.
2. village.
3. linear.
4. radial. Z8

The feature of this landscape which makes it suitable for the use of machinery is the

1. irrigation system.
2. scattered scrub.
3. topography.
4. transport system. Z9

A feature on the map which indicates that rice growing is not the only source of agricultural income for the area would be found at grid reference

1. 075705.
2. 705478.
3. 760305.
4. 881501. Z10

Water for agricultural use away from the river and channels is mainly obtained from

1. bores or wells.
2. springs.
3. tanks or small dams.
4. swamps and creeks. Z11

The main feature found at 975728 is a

1. creek.
2. lagoon.
3. meander.
4. wadi. Z12

Which transport method, within the local region, is most important to the rice industry?

1. Air.
2. Rail.
3. River.
4. Road. Z13

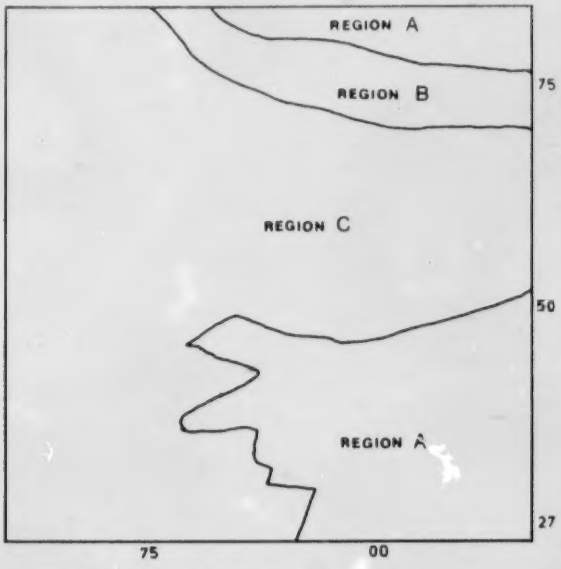
The straight line distance from the airfield (074705) to Uri Park (962671) is approximately

1. 8 kilometres.
2. 9 kilometres.
3. 12 kilometres.
4. 13 kilometres. Z14

Land which is subject to natural flooding would be found in area reference

1. 0471.
2. 0545.
3. 8969.
4. 9872. Z15

The Coleambally Sheet can be divided into three types of regions, each characterised by a dominant feature within the region. Below is a division of Coleambally into these regions. The next two questions refer to this division.



The dominant feature of Region A is the

1. land use.
2. transport network.
3. pattern of vegetation.
4. system of natural drainage. Z16

The dominant feature of Region B is the

1. natural vegetation.
2. type of land use.
3. drainage system.
4. transport network. Z17

The map symbol ⊥⊥ represents on the map sheet

1. a rice field.
2. a swamp.
3. a vineyard.
4. inundated land. Z18

The map symbol □ represents on the map sheet a

1. ruin.
2. spring.
3. well.
4. yard. Z19

The main function of Coleambally is to serve as

1. an industrial centre.
2. a tourist town.
3. a service centre.
4. a political centre. Z20

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4. ITEMS ON RICE GROWING IN S.W. N.S.W.

Questions Z21 to Z59 refer to Rice Growing.

Commercial rice farming differs from subsistence rice farming in that the commercial rice farmer

1. grows crops to be consumed on the farm.
2. rejects modern farming methods.
3. mainly uses labour instead of machinery.
4. grows the crops for sale at a profit. Z21

Rice growing in N.S.W. is carried out as

1. one crop in a rotation system.
2. a single crop system of farming.
3. part of a cycle similar to that of S.E. Asia.
4. an occasional crop dependent on seasonal rainfall. Z22

A major rice growing area in N.S.W. is the

1. Namoi Irrigation Area.
2. Hunter River Valley.
3. Coleambally Irrigation Area.
4. Hawkesbury River Valley. Z23

Most of Australia's rice is grown in the

1. north west of Western Australia.
2. south east of South Australia.
3. central tablelands of Queensland.
4. south west of New South Wales. Z24

The major grain crop in the Murrumbidgee Irrigation Area is

1. barley.
2. corn.
3. rice.
4. wheat. Z25

The major land use in the M.I.A. is best described as

1. dairying.
2. mixed farming.
3. orcharding.
4. rice farming. Z26

Rural settlement in the M.I.A. is

1. dispersed.
2. linear.
3. nucleated.
4. radial. Z27

The main function of Leeton is to serve as

1. an industrial centre.
2. a tourist town.
3. a rural service centre.
4. a political centre. Z28

A horticulturalist in the M.I.A. would commercially produce

1. wheat and wool.
2. fruit and vegetables.
3. rice and lambs.
4. rice and citrus fruits. Z29

The water supply for the Leeton area mainly comes from the

1. Burrinjuck Dam.
2. Eildon Dam.
3. Hume Weir.
4. Wyangala Dam. Z30

A major cost reducing factor in rice production in N.S.W. is the use of

1. a large pool of local labour for soil preparation.
2. mechanical equipment for farm tasks.
3. low grade locally produced natural fertilisers.
4. imported rice seed from S.E. Asia. Z31

Commercial rice farming began in N.S.W. in

1. 1884.
2. 1924.
3. 1954.
4. 1974. Z32

Rice growing in N.S.W. is concentrated in areas where

1. local markets are sufficient to buy all the crop.
2. transport is available to mills in metropolitan areas.
3. irrigation areas have suitable climate and soils.
4. port facilities for export are nearby. Z33

Clay soils are suitable for rice growing because they

1. dry out quickly to allow easy germination.
2. have drainage qualities suitable for ponding water.
3. can be worked continuously without fertilisation.
4. allow water to drain quickly through lower layers. Z34

The size of the average rice farm in the M.I.A. is

1. 100 hectares.
2. 200 hectares.
3. 300 hectares.
4. 400 hectares. Z35

Levee banks on a rice farm are used to

1. keep animals off the young crop.
2. allow water to circulate round the rice bays.
3. keep water at correct levels in the rice bays.
4. grow pasture between the rice fields. Z36

Hollows in the rice bays can result in

1. too much weed growth.
2. harvesting being delayed.
3. ducks becoming a problem.
4. the development of bloodworm. Z37

The quantity of fertiliser applied before rice planting, may be reduced if the field has had

1. successive crops of oats and barley.
2. several successive crops of wheat.
3. ploughing by multiple disc method.
4. a period of legume based pasture. Z38

The farmer's choice of rice variety is determined by the

1. Irrigation Commission.
2. yields and prices of rice.
3. Rice Growers' Co-operative.
4. type of machinery he has available. Z39

Rice is usually sown in

1. January.
2. April.
3. August.
4. October. Z40

A disadvantage of aerial sowing is that it

1. increases weed problems.
2. requires more cultivation.
3. is an expensive method.
4. leads to late maturation of the crop. Z41

A major requirement for the marketing of rice is a

1. good postal system.
2. good road system.
3. supply of hessian bags for storage.
4. storage silo on each farm. Z42

Water must flow continuously between bays in order to

1. conserve water by reducing evaporation.
2. prevent weeds establishing themselves.
3. reduce the incidence of slime.
4. spread the applied chemicals more evenly. Z43

Harvesting is carried out when the grain moisture content is approximately

1. 10%.
2. 20%.
3. 30%.
4. 40%. Z44

On many farms, contractors are used for

1. fertilising.
2. harvesting.
3. ploughing.
4. sod seeding. Z45

Harvesting takes place during

1. January - February.
2. March - April.
3. August - September.
4. October - November. Z46

Before harvesting can take place the

1. bays must be flooded.
2. bays must be drained.
3. weeds must be burned off.
4. stubble must be grazed off. Z47

On a rice farm a paddock may be sown to pasture for

1. 3 - 6 months.
2. 6 - 12 months.
3. 3 - 6 years.
4. 6 - 12 years. Z48

The typical rotation used on a rice farm is rice followed by

1. fallow, wheat and oats.
2. pasture, fallow and wool.
3. livestock, wheat and pasture.
4. wheat, oats and pasture. Z49

Supplementary income on many rice farms is earned from

1. grapes.
2. citrus fruits.
3. fat lambs.
4. sugar. Z50

The nutrient added to the soil by fertilisers used in rice growing is

1. calcium.
2. iron.
3. oxygen.
4. nitrogen. Z51

The area planted to rice in N.S.W. is restricted in order to

1. conserve water.
2. conserve soil fertility.
3. prevent soil erosion.
4. prevent oversupply. Z52

The reason why crop rotation is used on rice growing farms is to

1. allow more equitable sharing of water supplies.
2. maximise the economic efficiency of land use.
3. allow animals to feed on the rice crop.
4. remain within the Government quotas on crop growing. Z53

Rice is the dominant crop on mixed farms in the M.I.A. because it

1. grows easily under the natural climatic conditions.
2. provides the greatest assured return per hectare.
3. can be used as fodder if it is not sold.
4. is all bought at high prices by S.E. Asian countries. Z54

The total amount of rice planted in each year in S.W. N.S.W. is determined by the

1. annual rainfall in the preceding year.
2. capacity of the mills to cope with the crop.
3. rice industry forecasts of market requirements.
4. price farmers can get for alternative crops such as citrus fruit. Z55

The transport of products in large containers is called

1. bulk handling.
2. bulk storage.
3. mass handling.
4. mass storage. Z56

An organisation that is set up by growers to handle the transport and processing of their product is called a

1. marketing board.
2. producer co-operative.
3. retailing authority.
4. farmers' guild. Z57

Which of the following is not an advantage of growers selling rice to the Rice Marketing Board?

1. Guarantee of a market.
2. Maintenance of rice prices.
3. Assistance in the purchase of machinery.
4. Assistance in finding new markets. Z58

The main advantage of bulk handling of agricultural products is the

1. lower storage costs.
2. lower transport costs.
3. increased yields per hectare.
4. greater ease of fertilising the plants. Z59

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5. ITEMS ON RICE MILLING IN S.W. N.S.W.

Questions Z60 to Z73 refer to Rice Milling.

How long before the rice is harvested is the water drained from the fields?

1. 1 month.
2. 2 months.
3. 3 months.
4. 6 months. Z60

The machine which harvests the rice is called a

1. cultivator.
2. delver.
3. header.
4. tractor. Z61

When the rice reaches a storage shed a sample is taken to determine

1. grain size and fibre content.
2. grain colour and moisture content.
3. moisture content and mill-out.
4. fibre content and mill-out. Z62

The term 'mill-out' refers to the

1. weight of paddy rice received by the mill in a season.
2. quantity of milled rice leaving the mill in a season
3. ratio of whole grains to paddy rice received by the mill.
4. ratio of paddy rice to milled rice received by the mill. Z63

Temperatures in rice storage sheds are controlled by

1. asbestos insulation.
2. large fans.
3. large furnaces.
4. large refrigerators. Z64

In storage the moisture content of the rice is

1. 10%.
2. 16%.
3. 20%.
4. 22%. Z65

One purpose of parboiling the rice is to

1. increase the moisture content of the rice.
2. clean the rice of impurities.
3. increase the mill-out of the rice.
4. reduce the moisture content of the rice. Z66

The first milling operation is

1. crushing.
2. hull removal.
3. rolling.
4. grading. Z67

The rice whitening process is concerned with

1. bleaching and washing the rice.
2. washing and boiling the rice.
3. boiling and removing the bran from the rice.
4. removing the bran and germ from the rice. Z68

The purpose of the grading cylinders is to sort the

1. whole grain from the impurities.
2. white from the brown grains.
3. rice from the husk.
4. broken from the whole grains. Z69

The purpose of the sortex machine is to remove grains which are

1. small.
2. broken.
3. discoloured.
4. long. Z70

The organisation that owns and operates the rice mills in South Western N.S.W. is called the

1. Rice Owners and Rice Millers Company.
2. Rice Farmers Pty. Ltd.
3. Ricegrowers' Production Plant Pty. Ltd.
4. Ricegrowers' Co-operative Mills Pty. Ltd. Z71

Rice is transported to the mill by

1. truck in bulk.
2. truck in bags.
3. train in bulk.
4. train in bags. Z72

The paddy that has the highest value is the rice that has the

1. fewest broken grains.
2. fewest discoloured grains.
3. least husk at harvest.
4. least moisture at harvest. Z73

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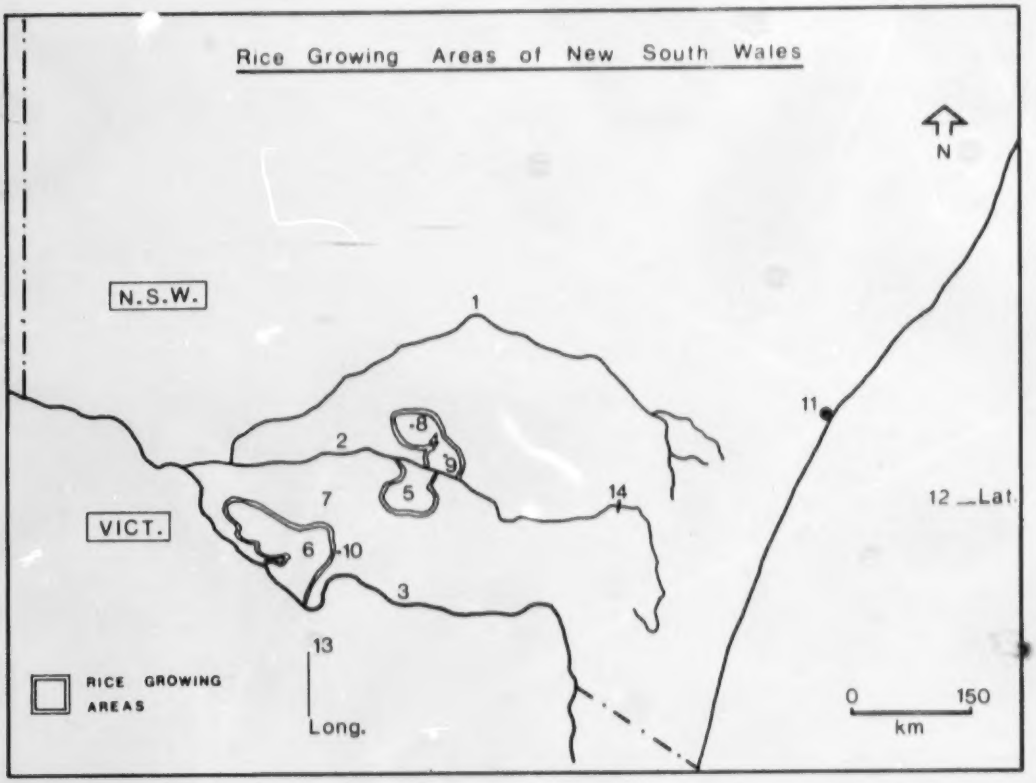
6. GENERAL ITEMS BASED ON STIMULUS MATERIAL SOME OF WHICH IS PART OF THE KIT

Questions Z74 to Z84 refer to the map below.



The river marked 2 is the

1. Darling.
2. Lachlan.
3. Murray.
4. Murrumbidgee. Z74

The river marked 3 is the

1. Lachlan.
2. Macquarie.
3. Murray.
4. Snowy. Z75

The Irrigation Area marked 4 is the

1. Mildura.
2. Murrumbidgee.
3. Murray Valley.
4. Yanco. Z76

The Coleambally Irrigation Area is marked on the map as number

1. 2
2. 5
3. 6
4. 7

Z77

The area between the rivers marked 2 and 3 is usually referred to as the

1. Darling Downs.
2. Southern Tablelands.
3. Barossa Valley.
4. Riverina.

Z78

Griffith is located on the map as the number

1. 8
2. 9
3. 10
4. 11

Z79

The line of latitude marked 12 is

1. 30°S.
2. 35°S.
3. 40°S.
4. 45°S.

Z80

The line of longitude marked 13 is

1. 135°E.
2. 140°E.
3. 145°E.
4. 150°E.

Z81

The scale of the map is approximately 1 cm equals

1. 50 kilometres.
2. 75 kilometres.
3. 150 kilometres.
4. 300 kilometres.

Z82

The straight line distance from the M.I.A. to Sydney is approximately

1. 300 kilometres.
2. 500 kilometres.
3. 750 kilometres.
4. 900 kilometres.

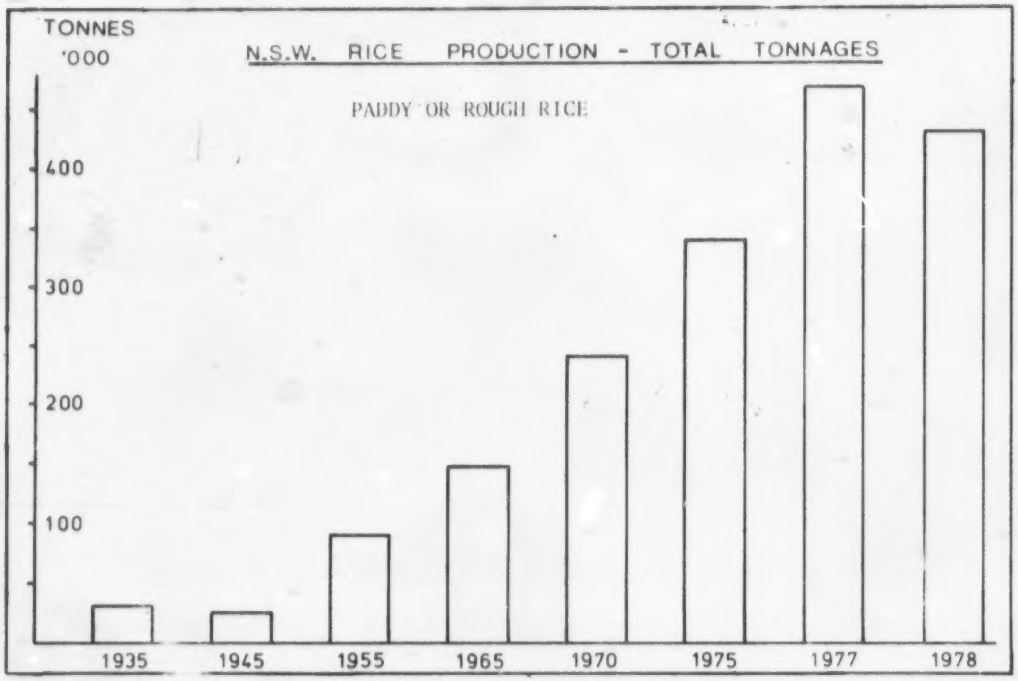
Z83

The feature marked 14 is the

1. Berembed Weir.
2. Burrinjuck Dam.
3. Snowy Mountains Scheme.
4. Riverina Agricultural Region.

Z84

Questions Z85 to Z88 refer to the graph below.



Rice production in N.S.W. reached a peak in

1. 1945.
2. 1975.
3. 1977.
4. 1978. Z85

Rice production grew by 50% between the years

1. 1945 - 1955.
2. 1955 - 1965.
3. 1970 - 1975.
4. 1975 - 1977. Z86

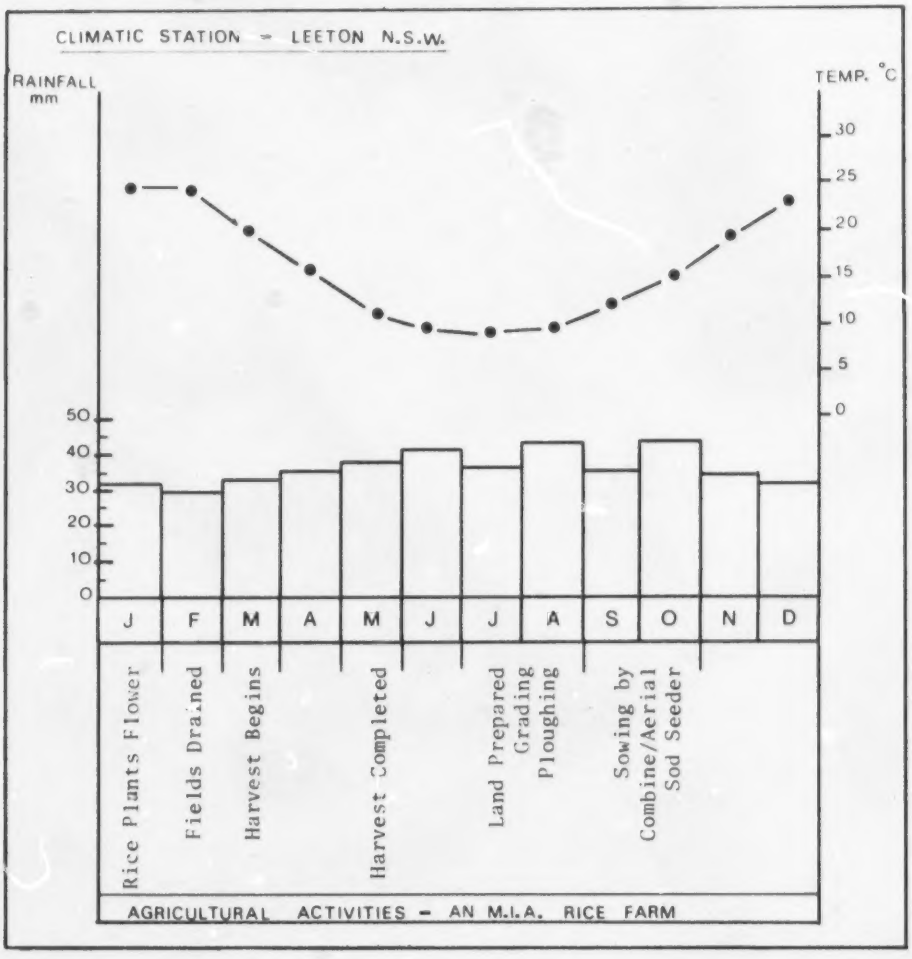
If the average yield per hectare was 6 tonnes in 1955 then the number of hectares under rice cultivation in N.S.W. was approximately

1. 15 600.
2. 56 000.
3. 94 000.
4. 109 600. Z87

If the area sown to rice in 1977 and 1978 was approximately the same, then the fall in paddy production from 1977 to 1978 was most likely due to a decrease in

1. rice yields.
2. rice prices.
3. domestic sales.
4. mill productivity. Z88

Questions Z89 to Z96 refer to the graph and work activities chart below.



The annual range of temperature is

1. 9°C.
2. 14°C.
3. 20°C.
4. 24°C. Z89

The rainfall pattern for Leeton can best be described as

1. unpredictable.
2. evenly distributed.
3. having a summer maximum.
4. having a winter maximum. Z90

The climatic feature of S.W. N.S.W. which makes it favourable for rice farming is the

1. high rainfall.
2. low rainfall.
3. warm temperature.
4. cold temperature. Z91

For commercial rice farming, the climate of South Western N.S.W. has

1. suitable rainfall and precipitation.
2. unsuitable temperatures and an adequate rainfall.
3. a rainfall which is excessive requiring special drainage.
4. a rainfall which is inadequate requiring supplementary water. Z92

The climatic feature of the graph which indicates that the station is in the southern hemisphere is the

1. moderate total annual rainfall.
2. seasonal distribution of rainfall.
3. seasonal pattern of monthly temperatures.
4. annual range of monthly temperatures. Z93

The season in which rice is planted is the

1. spring.
2. summer.
3. autumn.
4. winter. Z94

Leeton is a suitable location for rice growing because if rice is to germinate it <u>requires</u>

1. a large annual range of temperature.
2. a small annual range of temperature.
3. temperatures above $10^{0}C$.
4. temperatures above $20^{0}C$. Z95

The best type of supplementary crop for a rice farmer would be one which involves most activity in the months of

1. February, March and September, October.
2. January, February and March, April.
3. February, March and November, December.
4. June, July and December, January. Z96

Questions Z97 to Z103 refer to the map of Mr. Irvines farm (Rice Kit Sheet 4/12).

Water enters the farm from the

1. north.
2. south.
3. east.
4. west. Z97

The water which is to be used by the farm passes through

1. local dams.
2. gateways.
3. dethridge wheels.
4. windmill pumps. Z98

The farmland to the east of Johnsons Road has a slope which falls from

1. north to the south.
2. south to the north.
3. east to the west.
4. west to the east. Z99

The main income earning crop on the farm is

1. hay.
2. oats.
3. rice.
4. wheat. Z100

The livestock raised on the farm are

1. cattle, pigs and poultry.
2. cattle, sheep and pigs.
3. sheep, poultry and pigs.
4. sheep, cattle and poultry. Z101

A feature on the map which indicates that livestock are a part of the crop rotational system on the farm is the

1. contoured layout of paddocks.
2. distribution of dams.
3. location of the windmills.
4. location of the gateways. Z102

The land use of the farm could be best described as

1. capital intensive.
2. labour intensive.
3. horticultural.
4. pastoral. Z103

Questions Z104 to Z107 refer to the table below.

MILLED RICE SALES STATISTICS (Tonnes)	1975	1976	1977	1978
Australian Domestic Market	46 690	46 330	44 910	44 320
EXPORT:				
Africa	1 850	2 950	2 210	5 270
Fiji	9 120	13 390	14 290	11 930
Hong Kong	20 100	36 690	46 210	56 460
Indonesia	20 420	62 000	37 540	69 300
Malaysia/Singapore	16 380	7 900	1 640	2 840
Middle East	300	50	2 250	3 940
New Zealand	4 530	4 290	4 600	4 590
Pacific Islands	21 470	21 500	23 110	20 120
Papua New Guinea	51 150	57 220	68 870	75 940
Spain	-	-	-	21 070
U.K.	13 000	7 090	4 710	2 380
U.S.S.R.	-	28 760	-	14 300
World Food Program	3 530	3 580	2 050	4 290
All Other	8 470	10 010	7 670	13 820
Total Exports	171 720	225 430	215 150	306 250
Total Sales	218 410	301 790	260 060	350 570

The major market for Australian rice in 1975 was

1. Hong Kong.
2. Indonesia.
3. Papua New Guinea.
4. the Australian Domestic Market. Z104

The greatest percentage increase in Australian rice sales between 1975 and 1978 was to

1. Africa.
2. Hong Kong.
3. the Middle East.
4. Papua New Guinea. Z105

The Rice Product Sales Statistics indicate that during the period 1975 to 1978

1. domestic sales have been most important.
2. export markets have been vital.
3. non-Asian countries have increased in importance.
4. total sales have grown slowly due to trade. Z106

Between 1975 and 1978 the greatest percentage increase in product sales has occurred in

1. the Domestic Market.
2. the World Food Program.
3. total exports.
4. total sales. Z107

Questions Z108 to Z113 refer to the passage below.

MIXED FARMING IN THE M.I.A.

The largest category of landuse within the M.I.A. is "mixed farming" where farms of generally 160-240 hectares have been set apart for mixed farming and grazing pursuits.

At present, there exists a wide range of farm sizes within the Murrumbidgee and Coleambally Irrigation Areas, due to the adoption of differing home maintenance standards from time to time over 60 years of settlement.

Murrumbidgee, Coleambally & Murray Valley Irrigation Areas

Typical Farm Sizes

M.I.A.	No. of Rice Farms	Most Common Farm Size
Mirool Subdivision	134	180 hectares
Yanco Subdivision	237	180 hectares
Kooba Subdivision	103	160 hectares
Coleambally	313	200 hectares
Murray Valley	915	240 hectares

For many years rice growing on mixed irrigation farms with irrigation areas has produced the highest assured per acre return. In fact, under average management and excluding specialised crops, it shows the highest profitability per acre on typical mixed farms. Annual rice acreage allocations and the permission to grow rice are strictly controlled and the permitted acreages are varied annually, dependent on the rice industry forecasts of market requirements.

Over the years, farms officially described as "mixed farms" within the M.I.A. have become known as "rice farms", and although their annual rice area generally constitutes less than one quarter of the total farm area, the whole farming pattern and choice of enterprises - has been dictated by the requirements of the rice crop. It has been usual for the returns from rice to constitute about one half of total farm gross income.

The choice of farm enterprise is the prerogative of each individual farmer. No one can tell him what he must grow. The only limitations placed on holders of mixed farms are to prevent them from growing economic areas of fruit trees or vines to protect the interests of horticultural farms. Although the price of rice fluctuates, it is usually the most profitable crop available, and is grown each year as a matter of course. Consequently, mixed farms have become "rice farms", and all other farm operations are chosen and operated complementary to the rice crop. The irrigation layout is one of contour bays, rather than border ditch or row crop, simply because rice requires ponded water. As a generalisation, contour bay is the best layout for rice, but the least desirable for maximum production from other crops, and to some extent pastures. The rice crop does not occupy the whole farm, but forms part of a rotation. Each farm is allocated a maximum rice area each year, according to market prospects. Control of this area is obtained through policing water deliveries.

Over the last few years some farmers have abandoned the traditional rotation (using pastures and livestock) because of the big increase in rice acreage permitted (leaving less area for pasture), and because returns from livestock have been severely reduced.

Mixed farms in S.W. N.S.W. have generally

1. grown in size in each area.
2. reduced in size in each area.
3. remained stable in size from area to area.
4. fluctuated in size from area to area. Z108

Rice acreage in N.S.W. is limited by the

1. weather.
2. availability of fertilisers.
3. market requirements.
4. milling capacity. Z109

Rice is the most important crop on mixed farms because it

1. uses one-half of the available land.
2. has the highest return per acre.
3. constitutes one-quarter of total income.
4. is varied annually upon industry forecasts. Z110

The decision as to which variety of rice a particular mixed farm grows is

1. dependent on the water table.
2. dependent on the availability of fruit trees.
3. the choice of the individual farmer.
4. the decision of the Rice Marketing Board. Z111

The largest farms would be found in the

1. Murray Valley.
2. Kooba Subdivision.
3. Yanco Subdivision.
4. Coleambally Irrigation Area. Z112

The irrigation layout for rice is

1. pasture layout.
2. crops in rows.
3. contour bays.
4. border ditch. Z113

Questions Z114 to Z117 refer to the table below.

RICE PADDY

Country	Yield Kg/Ha			Production '000 Tonnes			
	1965	1974	1976	1965	1974	1976	1980(Est)
Australia	6 167	6 059	5 645	136	409	417	560
Egypt	5 307	5 068	5 227	1 845	2 242	2 230	N/A
Malagasy	1 854	1 626	1 728	1 563	1 844	1 814	2 500
U.S.A.	4 374	4 968	5 244	3 084	5 098	5 308	4 600
Brazil	1 607	1 557	1 451	6 123	6 483	9 560	9 220
Columbia	1 965	4 345	4 262	576	1 540	1 560	N/A
Bangladesh	1 680	1 729	1 850	15 048	16 930	18 500	N/A
China	2 780	3 266	3 294	86 038	115 213	116 570	122 200
India	1 480	1 567	1 826	52 733	59 368	70 500	87 000
Indonesia	1 762	2 632	2 608	12 396	22 473	22 950	23 700
Japan	5 012	5 860	5 503	16 444	15 964	15 292	16 600
Thailand	1 623	1 825	1 817	11 267	13 386	14 900	16 250
Burma	1 642	1 757	1 815	7 786	8 583	9 400	11 000

The yield is given in kilograms per hectare - this can be converted to tonnes per hectare by dividing by 1 000.

The country with the greatest rice production in 1976 was

1. **Australia.**
2. **China.**
3. **Japan.**
4. **the U.S.A.** **Z114**

The country with the greatest yield per hectare in 1976 was

1. **Australia.**
2. **China.**
3. **Japan.**
4. **the U.S.A.** **Z115**

The country with the greatest percentage increase in the productivity of rice land between 1965 and 1976 was

1. Australia.
2. Columbia.
3. China.
4. Indonesia. Z116

Australia's rice yield per hectare is much greater than that of the traditional producer, China. The reason for this would be the greater

1. amount of land cultivated.
2. amount of labour used.
3. use of technology.
4. use of irrigation. Z117

Questions Z118 to Z124 refer to the passage below (Notes pages 9.12 and 10.12).

Sid Marchinton was a member of the Rice Marketing Board from 1949 to 1952. HERE IS HIS STORY:

When I see the present modern farming equipment used for growing and harvesting rice, I wonder if people realise the revolutionary advancement that has been made in the industry in 46 years. Australia is the youngest rice-growing country in the world, and has the highest yield per acre of all rice-growing countries. Rice is an important export income earner for Australia, more than 80% of the crop leaving the country. Total crop is approximately 250 000 tonnes. The industry started in 1924 when the Irrigation Commission invited growers to grow a crop of rice on a commercial basis from seed which had been grown by Mr. Brady in an experimental plot at Leeton.

I was one of the six growers, five in the Yanco and one in the Mirool area, who answered the invitation. I had previously seen ricegrowing in California, where I had spent twelve months prior to my return to Australia after the 1914-1918 war, and I was keen to take advantage of the opportunity when it offered. I contracted with the Irrigation Commission to grow a rice crop on a commercial basis on the following terms:

In the event of the crop not proving a success through no fault of the grower, the grower was not required to pay for the seed, but should it prove successful, the Irrigation Commission was to have the right to purchase the rice at current market rates. Ascertaining current market rates gave me quite a headache. Anyhow I successfully grew the rice crop, and the problem was to harvest it as there was no rice harvesting machine in those days. Luckily the ground was dry at harvest time, and I managed to harvest the crop with a wheel driven harvester - not a header - and six horses. It was necessary to keep the horses moving when harvesting to maintain the drum speed, and I could only take a portion of the comb to prevent the harvester being overloaded.

30 CWT. YIELD

The crop yielded about 30 cwt. which was quite an effort for the harvester to handle. The sample was quite good, and eventually I got the rice into the sacks. The harvest was quite an event on my calendar. After growing the rice I had a good deal of trouble ascertaining the current market price. Eventually a price was arrived at, and the Irrigation Commission purchased the seed for the following year's cropping.

A few years elapsed before ricegrowing was accepted by the majority of farmers. It was thought that the submergence of the ground under six inches of water for four months would ruin it for other crops, but it was soon proved otherwise as wheat crops of twenty bags to the acre were grown following a rice crop.

When I think back on the various methods I used for harvesting rice in the early days of ricegrowing, it is rather amusing now, but was not so at the time. I have used a wheat harvester, a stripper and winnower, reaper and binder, worked by a 3 h.p. engine on skids attached to the rear of the binder and connected with a belt, and in desperation in a very wet year finished harvesting with pigs, which fattened well on the rice crop.

The ground at harvest time was often soft and muddy, making it unsatisfactory for ground wheel-driven machinery to work. The first rice header produced was an improvised wheat header with a 7 h.p. engine mounted on the forecarriage and connected by a leather belt to the mechanism of the header. That header was named the "Coffee Pot", as in front of the engine was mounted a cylinder water tank, with a sloping top and a small chimney from which steam intermittently puffed. I shall never forget the sound of the old "Coffee Pot", cough, cough, coughing around the paddock, and when the engine missed a cough, the header driver's heart would miss a beat. The "Coffee Pot" when harvesting rice was taxed to its capacity. There was no margin, and if the header was not adjusted to 100 per cent, there would be continual stoppages, which could be very annoying, as the hours were precious during harvest, and were limited by the morning dews, which sometimes did not dry out until 11 o'clock.

Reprint from Rice Mill News

The year in which rice was first grown along the Murrumbidgee was

1. 1897.
2. 1919.
3. 1924.
4. 1946. Z118

Many of the early rice farmers were

1. people from the city.
2. unsuccessful coffee farmers.
3. World War I veterans.
4. Californian immigrants. Z119

Rice farming as an industry in Australia

1. began last century.
2. is the youngest in the world.
3. began before it did in other western countries.
4. was the result of an experimental crop grown in the U.S.A. Z120

If the rice crop was not a success the first rice growers in N.S.W.

1. received the current market price.
2. received less than the current market price.
3. had to pay for all seed used.
4. did not have to pay for all seed used. Z121

Early rice was transported by using

1. sacks.
2. containers.
3. rice harvesters.
4. rice headers. Z122

Rice growing was not initially accepted by other farmers because of the

1. low market price.
2. lack of suitable machinery.
3. higher returns available from wheat.
4. fear that flooding ruined croplands. Z123

A problem at harvest time was the

1. lack of markets for the rice.
2. constant breakdowns in farm machinery.
3. long sunlight hours drying out the ground.
4. transport of the crop to storage sheds. Z124

TOPIC Z

Rice Growing and Milling in South West New South Wales.

Answers to Multiple Choice Questions Z1 to Z124

Question	Key	Question	Key	Question	Key	Question	Key
Z1	2	Z32	2	Z63	3	Z94	1
Z2	2	Z33	3	Z64	2	Z95	3
Z3	3	Z34	2	Z65	2	Z96	4
Z4	4	Z35	2	Z66	3	Z97	2
Z5	3	Z36	3	Z67	2	Z98	3
Z6	4	Z37	2	Z68	4	Z99	2
Z7	2	Z38	4	Z69	4	Z100	3
Z8	1	Z39	2	Z70	3	Z101	4
Z9	3	Z40	4	Z71	4	Z102	2
Z10	3	Z41	3	Z72	1	Z103	1
Z11	3	Z42	2	Z73	1	Z104	3
Z12	2	Z43	3	Z74	4	Z105	3
Z13	4	Z44	2	Z75	3	Z106	2
Z14	3	Z45	2	Z76	2	Z107	3
Z15	4	Z46	2	Z77	2	Z108	4
Z16	1	Z47	2	Z78	4	Z109	3
Z17	3	Z48	3	Z79	1	Z110	2
Z18	1	Z49	4	Z80	2	Z111	3
Z19	4	Z50	3	Z81	3	Z112	1
Z20	3	Z51	4	Z82	2	Z113	3
Z21	4	Z52	4	Z83	2	Z114	2
Z22	1	Z53	2	Z84	2	Z115	1
Z23	3	Z54	2	Z85	3	Z116	2
Z24	4	Z55	3	Z86	2	Z117	3
Z25	3	Z56	1	Z87	1	Z118	3
Z26	2	Z57	2	Z88	1	Z119	3
Z27	1	Z58	3	Z89	2	Z120	2
Z28	3	Z59	2	Z90	2	Z121	4
Z29	2	Z60	1	Z91	3	Z122	1
Z30	1	Z61	3	Z92	4	Z123	4
Z31	2	Z62	3	Z93	3	Z124	2

D. West, Government Printer, New South Wales – 1980